Pasquier Panel Products

Mike Pasquier and the development of waterproof plywood

The following is an extract from page 4, 5 and 11 of a monograph published by the Plywood Pioneers Association. The subject was the Harbor Plywood Corporation, founded by Bob Wuest in Aberdeen Washington.

(pages 4 and 5) Almost on the eve of Christmas in 1934, Wuest startled the plywood world by announcing the successful development of a new type of Douglas fir plywood made with a waterproof hot-pressed resin adhesive. It was to become famous as Super Harbord, the most significant development in the entire history of Douglas fir plywood.

This new product marked the culmination of several years of painstaking and often frustrating research by several of Harbor Plywood's chemists and technicians, who had been strongly supported and encouraged by Wuest, Daniels and Welch.

Michel Pasquier, a young chemical engineer graduate from the University of Washington, after six months in Harbor's mill, had been assigned to laboratory work to try to develop a waterproof adhesive for plywood. In studying various formulas and patents, he learned that a Dr. James Nevin held a patent on a water-soluble phenolic resin.

At Mike's suggestion, Art Welch, production Vice President, who at several plants had tried out all kinds of animal and casein glues in search of a waterproof type, got in touch with Nevin and hired him. Nevin, evidently at that time doing glue research for Pacific Lumber Co., brought with him Bill Martin, a University of Southern California graduate chemist. Although Nevin's patent didn't work well with fir plywood, a modification developed by Nevin's research group at Harbor did, and before long a new kind of fir plywood was born.

A high temperature of about 35° F was required to set the cresylic resins employed in this new plywood, and this created a severe warping problem. Pasquier realized that humidifying was necessary and was able to get Archie Knauss, wood technologist and dry kiln expert at the U. S. Forest Products Laboratory, to help develop a practical solution.

Knauss did this, and a number of years later, after World War II, returned to Harbor to assist with a similar problem in new products being developed there.

Exterior plywood heralded a new era for plywood as it slowly gained nationwide acceptance for all kinds of severe exposure uses – exterior siding, refrigerator car lining, boat planking, farm structures, and many others.

As Bob Cour* states in The Plywood Age, “At Harbor, Wuest and Welch could turn out any kind of plywood needed.

Daniels and Buckner (Charlie) could sell any kind they could make. It was a fabulous historymaking combination. . . .”

Production of Super Harbord began in January, 1935. Soon after, M&M Woodworking Co. bought hot press equipment for producing Exterior plywood, using a film glue with a German press, but without much success. In January, 1937, Pasquier was induced to organize and manage its Exterior plywood department and M&M became an important producer. With the outbreak of World War II, other mills followed the trend to Exterior plywood which soon became a standard plywood product wherever severe exposure conditions were expected. Industry test standards were adopted under the 1942 U.S. Commercial Standard, and panels meeting these requirements were classified as “Exterior.”

(page 11) Veterans of the industry well recall Harbor’s use of a green dye in the glueline of “Super Harbord” to assure identification, if needed. It also was a costly item so was eliminated. Their customers, however, thought Harbor had cheapened the glue quality and complained vociferously. So, the green dye had to be added again, and quality, in the customer’s eye, was restored.

Plywood in Retrospect

HARBOR PLYWOOD CORPORATION

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